

## ABSTRACT

A solder material optimum in the melting temperature as a solder material, superior in mechanical properties and in wettability and capable of assuring excellent soldering performance. For a Sn-Zn-Bi based solder material, germanium and cooper is added, while germanium and further copper are added for a Sn-Bi-Ag based solder material and germanium and silver are added for a Sn-Zn-In based solder material.